Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (currently amended) A method of thermally spray coating a cylinder wall of a metal engine block, said method comprising:

providing a high velocity oxygen fuel (HVOF) device;

advancing a feed wire of ferrous-based material into the HVOF device to locate a tip end of the wire in a high temperature zone of the HVOF device;

supplying a high velocity jet flow of gaseous fuel to the high temperature zone of the HVOF device;

supplying a high velocity jet flow of oxygen to the high temperature zone of the HVOF device and combusting the oxygen and fuel to generate sufficient heat in the high temperature zone to melt the tip end of the feed wire in the high temperature zone and spraying the molten feed wire material onto the cylinder wall surface of the engine block to form a ferrous-based coating thereon; and

controlling the flow of the oxygen relative to the flow of the gaseous fuel to provide an oversupply of oxygen in excess of the oxygen required for stoichiometric combustion of the gaseous fuel, and reacting the excess oxygen with an associated fraction of the wire feed material in the high temperature zone to combust the associated fraction of the wire feed material as a source of solid fuel to provide a supplemental source of heat to the high temperature zone of the HVOF device; and wherein the ferrous-based coating includes an addition of at least one of: yttrium, calcium, magnesium, titanium, zirconium, hafnium, cerium, and lanthanum; and wherein the amount of oversupply of oxygen is sufficient to increase the deposition rate of the molten metal on the cylinder wall by more than two-fold than that deposited when oxygen is ~~suppled~~ supplied at that required for stoichiometric combustion of the gaseous fuel.

2. (previously presented) The method of claim 1 wherein the oxygen is oversupplied in an amount of at least twice that needed for stoichiometric combustion with the fuel.

3. (original) The method of claim 1 wherein the ferrous-based coating includes additions of aluminum.

4. (original) The method of claim 3 wherein the aluminum is added in an amount ranging from about 0.5 to 3.0 wt. % of the ferrous-based coating.

5. (original) The method of claim 4 wherein the aluminum is present in the range of 1.5 to 2.5 wt. %.

6. (original) The method of claim 3 wherein the aluminum reacts in the HVOF device with the ferrous-based coating to produce $FeAl_2O_4$ oxides in the applied coating.

7. (original) The method of claim 6 wherein said additive material is present in an amount equal to about 1 wt. % or less of the ferrous-based coating.

8. (original) The method of claim 1 wherein said additive material reacts with impurities in the coating to bind and prevent the impurities from segregating to grain boundaries and interfaces of the coating.

9. (original) The method of claim 1 wherein said additive material reacts with any sulfur to prevent sulfur embrittlement of the applied coating.

10. (previously presented) The method of claim 1 wherein the metal engine block comprises at least one of aluminum, magnesium and alloys thereof.

11. (previously presented) The method of claim 5 wherein the metal engine block comprises at least one of aluminum, magnesium and alloys thereof.

12. (previously presented) The method of claim 1 wherein the gaseous fuel comprises at least one of methane and propane.

13. (previously presented) The method of claim 5 wherein the gaseous fuel comprises at least one of methane and propane.

14. (canceled)

15. (previously presented) A method as set forth in claim 1 with the proviso that the ferrous-based coating does not include the addition of magnesium.

16. (currently amended) A method of thermally spray coating a cylinder wall of a metal engine block, said method comprising:

providing a high velocity oxygen fuel (HVOF) device;

advancing a feed wire of ferrous-based material into the HVOF device to locate a tip end of the wire in a high temperature zone of the HVOF device;

supplying a high velocity jet flow of gaseous fuel to the high temperature zone of the HVOF device;

supplying a high velocity jet flow of oxygen to the high temperature zone of the HVOF device and combusting the oxygen and fuel to generate sufficient heat in the high temperature zone to melt the tip end of the feed wire in the high temperature zone and spraying the molten feed wire material onto the cylinder wall surface of the engine block to form a ferrous-based coating thereon; and

controlling the flow of the oxygen relative to the flow of the gaseous fuel to provide an oversupply of oxygen in excess of the oxygen required for stoichiometric combustion of the gaseous fuel, and reacting the excess oxygen with an associated fraction of the wire feed

material in the high temperature zone to combust the associated fraction of the wire feed material as a source of solid fuel to provide a supplemental source of heat to the high temperature zone of the HVOF device; and wherein the ferrous-based coating includes an embrittlement-reducing addition selected from the group consisting essentially of: yttrium, calcium, titanium, zirconium, hafnium, cerium, lanthanum and mixtures thereof; and wherein the amount of oversupply of oxygen is sufficient to increase the deposition rate of the molten metal on the cylinder wall by more than two-fold than that deposited when oxygen is ~~suppled~~ supplied at that required for stoichiometric combustion of the gaseous fuel.